THE MORTON ARBORETUM

Joy Morton, founder LISLE, ILLINOIS

Bulletin of Popular Information

Volume 33 December, 1958 Number 12

CONIFERS OF THE MORTON ARBORETUM VIII

Pinus ponderosa (Laws), Ponderosa, Western Yellow or Bull Pine

While credit for the discovery of the Western Yellow Pine belongs to members of the Lewis and Clark Expedition, who found it in 1804 while exploring the upper reaches of the Missouri River, its naming and introduction trace back to David Douglas, the Scotch botanical collector, who came across it twenty-two years later along the Spokane River in Eastern Washington. Its massive size and ponderous bulk suggested to Douglas the name *"ponderosa"*, a name he befittingly gave to one of the tallest and most important timber trees of the United States. One hundred and fifty feet is usually considered maximum height for the species, although the Pacific Coast type ranging from British Columbia to Mexico may exceed 200 ft. and attain trunk diameters of 5 to 8 ft. at breast height. It is of course not hardy here, the strain occurring along the east slopes of the Rockies into South Dakota and Texas being the one adaptable to midwestern conditions.

In the montane zone of the Colorado foothills, at elevations varying from 5,500 to 8,500 ft. one will find the Ponderosa Pine in its most attractive aspect. There, in park-like mesas it occurs as a symmetrical, pyramidally headed tree of coarse texture with stout spreading and often pendulous branches upturned at the ends. On the Pacific side of the Continental Divide it is taller, with a narrow spire-like head surmounting the massive trunk. Conspicuous cinnamon brown to orange yellow bark is a feature of older trees, bark fissured into irregularly divided scales. On immature trees it is almost black, a fact which in some areas has resulted in the use of the name Black Jack Pine.

Although usually bearing its needles three to a cluster, it may occasionally produce only two, rigid, blunt pointed ones of dull dark green firmly set in a strong sheath. Their average length is from 3 to 6 inches, increasing to 11 in favored parts of the range. They are thickly massed on the orange brown twigs to which they remain attached from three to seven years. The twigs emit a resinous fragrance when broken.

Ponderosa Pine cones, like the needles, vary geographically, with 3 to 6 inches being the average length. They are light reddish brown in color,

closely set on the branches, usually in clusters, and have a rounded or conic-ovoid contour. Each cone scale is tipped by an identifying outward curving prickle. It takes two years for the young cones to reach maturity, the green ones remaining in an upright position into their second year. At that time their coloring changes to brown and their position reverses (to pendent), releasing the seeds.

Like all pines, *"ponderosa"* grows best in full sun in perfectly drained soil. It is a good grower, useful in landscaping chiefly as a screen or background tree.

Pinus rigida (Mill), Pitch Pine

From the opposite side of the continent comes the Pitch Pine, another three needled (occasionally two) species quite different in appearance from the Ponderosa. A much lower growing tree, averaging 40 to 50 ft. tall, though sometimes 75 or 100, and from 1 to 2 ft. in diameter, it has about it an unmistakable picturesque quality even when immature. Beyond the limits of its natural range, however, which extends from New Brunswick south to Georgia and along the slopes of the Alleghenies through eastern Tennessee, Kentucky, Ohio and Pennsylvania, this picturesqueness may give way to gauntness as evidenced by the representative specimens in the Arboretum collection. Typical trees are low branched and wide topped with comparatively short horizontally spreading branches forming an open, irregular pyramid. The bark of old trunks is deeply and irregularly fissured into broad, flat ridges covered with dark red brown scales.

"Rigida" refers to the stiffness of the twisted needles borne at right angles to the twigs and not infrequently along the trunks themselves. From 2½ to 5 inches long, pointed at the tips and of medium green color, they occur mostly three to a cluster, and persist for two years before dropping

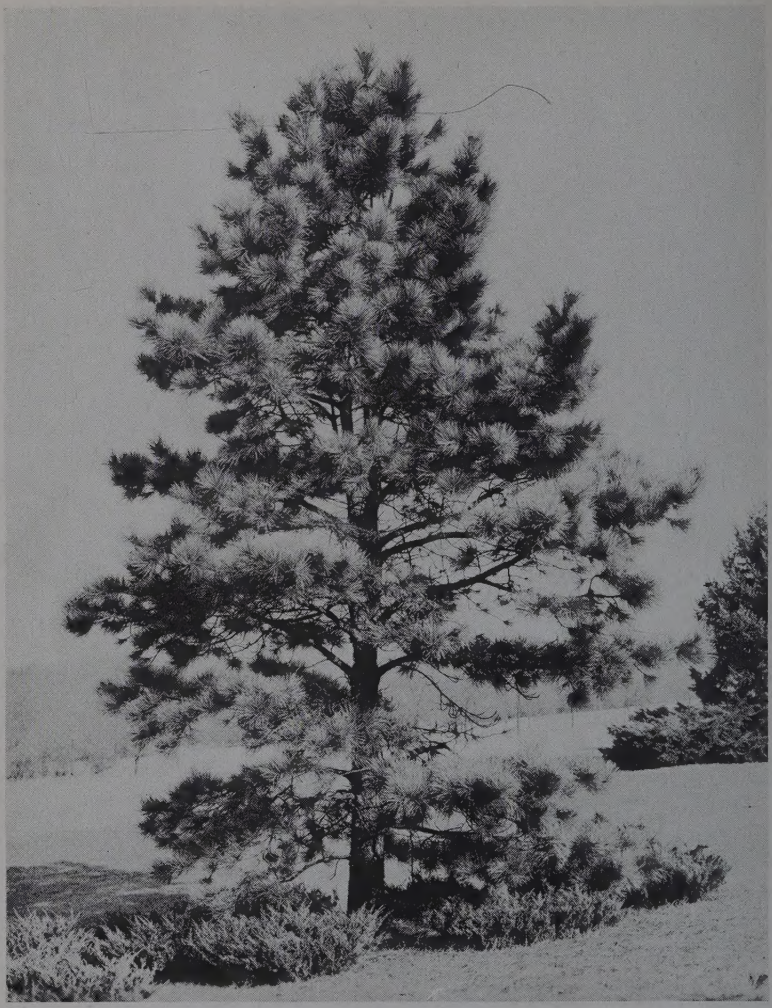
Pitch Pine flowers appear in April or May, the cylindrical yellow staminate ones in clusters at the base of the new growth simultaneously with the pistillate inflorescences borne singly or clustered along the sides of the twigs. Two years ofter fertilization the cones mature. The latter are ovoid-conical or ovate in shape, medium brown in color and from 2 to 4 inches long. Paired or in clusters, they are closely set on the branches to which they cling for several years. Slender, inward curving prickles are an identifying feature of the cone scales.

In its native haunts the Pitch Pine develops a characteristic landscape interest entirely lacking hereabouts. There it is also considered a very virile species capable of thriving under the most adverse conditions. Dry rocky slopes, sandy dunes, salt spray ridden seashores and cold swampy areas offer little if any opposition to its successful culture. It is remarkably fire resistant, too, being one of the few pines able to send forth new growth after being burned over.

The Arboretum plot of Pitch Pine is located near the base of Pine Hill, not far from the intersection of Pine Hill and Lake Roads. It was planted in the spring of 1922, with plants 1½ to 2 ft. in height.

E. L. Kammerer

Pinus rigida (Hill), Pitch Pine, picturesque, Eastern species valued at one time as a source of pitch for naval stores.



Pinus ponderosa (Laws), Ponderosa, Western Yellow or Bull Pine in the Arboretum Conifer Collection along the upper extension of the Hedge Garden axis.

Trustees: Sterling Morton, Chairman; Clayton J. Adams; Edward H. Baker, Jr.; Laurence A. Carton; Garfield King; Wirt Morton; Daniel Peterkin, Jr.; Suzette Morton Zurcher; Victor K. Zurcher

Staff: Clarence E. Godshalk, Director; E. Lowell Kammerer, Curator of Collections; Mrs. Raymond Watts, Naturalist; Anthony Tyznik, Asst. to the Director; Webster R. Crowley, Jr., Research Technician; Gordon Scott, Horticulturist; Walter E. Eickhorst, Asst. Curator of Collections; Roy M. Nordine, Propagator; Raymond Schulenberg, Asst. Propagator

Published monthly by The Morton Arboretum, Lisle, Ill. Subscription $1.00 a year; single copies 10c; double copies 20c